What is claimed is:

1. (original) A method for determining the suitability of an optical material for the production of optical elements, particularly for high-energy light irradiation, with which radiation-induced absorption in the optical material is determined by radiating said optical material with excitation radiation and determining the total fluorescence which is induced via said radiation and which is composed of intrinsic and non-intrinsic portions,
wherein the non-intrinsic fluorescence is determined, as the fluorescence, during and/or immediately following radiation.

2. (original) The method as recited in Claim 1,
wherein the intrinsic fluorescence is also determined and the suitability of the material is determined based on the ratio of intrinsic and non-intrinsic fluorescence.

3. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1, wherein the material is irradiated for a short period of time.

4. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1, wherein the irradiation is carried out using a laser pulse.

5. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1, wherein the fluorescence is determined using an I-CCD camera.

6. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1, wherein the determination is carried out using a grating spectrograph.

7. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1, wherein, before the fluorescence is determined, the wavelength of the excitation radiation is hidden using a suitable device.

8. (original) The method as recited in Claim 7,
wherein the device is a filter and/or a spectral grating.

9. (currently amended) The method as recited in one of the preceding Claims Claim 1, wherein the fluorescence is determined within the decay time of the non-intrinsic fluorescence after the optical material is irradiated.

10. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1, wherein the optical material is CaF_2, BaF_2, SrF_2, LiF, NaF, MgF_2 and/or $KMgF_3$.

11. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1, wherein, when an intrinsic fluorescence band appears, it is used to standardize the non-intrinsic fluorescence bands.

12. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1, wherein the material is pre-irradiated until the rapid damage is saturated before the determination using laser irradiation.

13. (currently amended) The method as recited in ~~one of the preceding Claims~~ Claim 1, wherein the radiation-induced absorption is accomplished using a comparable energy density.

14. (currently amended) A device for carrying out the method as recited in ~~one of the Claims 1 through 13~~ Claim 1, including a source for transmitting excitation radiation that defines a light path, a holder for a material sample to be determined, the material sample being positioned in the light path, and a device located outside the light path for determining a fluorescence induced in the material sample by the excitation radiation,

wherein a barrier element is located between the sample and the device for determining the fluorescence that prevents passage by the high-energy excitation radiation.

15. (currently amended) The use of the optical material obtained with the method as recited in ~~one of the Claims 1 through 13 or by using the device as recited in Claim 14~~ Claim 1 for the production of lenses, prisms, light-conducting rods, optical windows, optical components for DUV photolithography, steppers, excimer lasers, wafers, computer chips, and integrated circuits and electronic devices that contain circuits and chips of this type.